

# **NAVWEPS OP 2309 (VOLUME 4)**

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**(THIRD REVISION)**

## **AIM-9B GUIDED MISSILE (FORMERLY SIDEWINDER 1A)**

### **PREFLIGHT CHECKOUT AND LOADING AND UNLOADING MISSILE**

**THIS PUBLICATION (VOLUMES 1, 2, 3, AND 4) SUPERSEDES  
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## FOREWORD

Ordnance Pamphlet 2309 (Third Revision) describes the AIM-9B guided missile, gives the theory of operation, and covers handling, inspection, assembly, and stowage of components.

This publication consists of four volumes.

Volume 1-Description and Operation  
(CONFIDENTIAL)  
Chapter 1-Description  
Chapter 2-Operation

Volume 2-Handling, Storage, and Fuze Assembly  
at Naval Weapons Stations  
Chapter 1-Handling and Storage  
Chapter 2-Fuze Assembly  
Chapter 3-Records

Volume 3-Shipboard Handling, Inspection, Stowage,  
and Missile Assembly  
Chapter 1-Shipping, Handling, and Stowage  
Requirements  
Chapter 2-Component Inspection and Missile  
Assembly  
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Volume 4-Preflight Checkout and Loading and  
Unloading Missile  
Chapter 1-Preflight Checkout Procedures  
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## SAFETY SUMMARY

The following WARNINGS are repeated from the text for the protection of personnel.

### WARNINGS

Before making a preflight test of the Aero 3A launcher, verify that all armament has been removed (both internal and external) from the aircraft. (Page 1-2)

Although the preflight jettison test is for AIM-9B missile circuits only, other aircraft jettison circuits may be energized during this test. Therefore, reaffirm that all ordnance (both internal and external) and other external stores have been removed from the aircraft. (Pages 1-4, 1-7, and 1-8)

Make sure that the firing system cannot be energized during missile loading operation. Never stand directly behind or in front of a missile that is being loaded onto a launcher. When a missile is loaded on a launcher, all unnecessary personnel should be at least 25 feet from the flank of the launcher and should not be behind the launcher. The loaded launcher is considered dangerous within 200 feet aft. With the exception of the final signal tone, no electrical tests are to be conducted while the missile is on the launcher. The safety pin shall remain in place until the aircraft is ready to catapult. For complete safety, aircraft power should be OFF during loading and unloading of missile. (Page 2-1)

When loading the missile on the LAU-7/A launcher, do not stand directly in front or behind the missile during loading operation. Stand clear of the launcher at all times after the missile

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is loaded on the launcher. Verify the safe condition of the launcher and aircraft before loading the missile on the aircraft by checking to (a) make certain that safety pin is installed properly, (b) verify that cockpit switches are OFF, (c) verify that aircraft engines are OFF and that auxiliary power is NOT connected to aircraft, and (d) make certain aircraft is grounded. (Page 2-2)

Failure to seat the detent properly when loading the missile on the launcher will result in either the missile not firing when the firing button is pressed or in loss of the missile during arrested landing or catapult launching. (Page 2-3)

Before removing a missile from the launcher make certain that the battery and aircraft armament switches are OFF and that the safety pin is in place on the launcher. (Page 2-4)

The following CAUTIONS are repeated from the text because if not strictly observed the effectiveness of the equipment or missile may be destroyed.

## CAUTIONS

Visually check for improper positioning of both forward snubber cams. Return launchers with cracked or broken cams to an O and R facility for repair. Check for free movement when detent is raised. Check the unloading stirrup on the aft end of the Aero 3A launcher to be sure it is properly secured to the launcher and is not bent or deformed in any way. Check firing pin springs by depressing them; also check ceramic and teflon holders of firing pins. (Pages 1-2 and 1-6)

When testing the launcher with the AN/ASM-11 or AN/ASM-20 test set, do not leave test set selector switch in any test position for more than 5 minutes. (Pages 1-3, 1-6, and 1-7)

Never install a missile on the launcher with the NPA on the motor. Failure to remove the NPA will cause critical damage to the aircraft when the missile is launched. (Pages 2-1 and 2-3)

Never force a missile onto the launcher. Do not use excessive force or supplemental leverage in depressing the nose latch button. (Page 2-3)

The forward-receptacle dust cap must be kept in place on the launcher power supply receptacle at all times when the missile is not on the launcher. The upper receptacle dust cap must be on the aircraft-pylon receptacle on the launcher top side whenever the launcher is removed from the aircraft. (Page 2-3)

## Chapter 1

# PREFLIGHT CHECKOUT PROCEDURES

### 1-1 INTRODUCTION

The Aero 3A launcher or LAU-7/A launcher can be used to fire AIM-9B missiles. The Aero 3A launcher fires AIM-9B missiles only, but the LAU-7/A fires AIM-9B, 9C, or 9D missiles.

**1-1.1 AERO 3A LAUNCHER.** The Aero 3A launcher operates from aircraft supplying single-phase power. The AN/ASM-11 or ASM-20 guided missile launcher test set is used to check the operability of the launcher and aircraft circuits. The 3/8-inch hex wrench is required to raise the detent of the launcher and to raise the launcher nose cover to connect the adapter connector to the launcher umbilical connector.

**1-1.2 LAU-7/A LAUNCHER.** The LAU-7/A launcher equipped with Power Supply PP-2581/A operates from single-phase aircraft power. When equipped with Power Supply PP-2315/A, it operates from either single-phase or three-phase aircraft power. This launcher and aircraft can also be checked with the ASM-11 or ASM-20 test set, but a launcher adapter (Part No. 10001-1517359, FSN VM-5935-885-9397-M558) must be installed when the ASM-20 test set is used. The 5/16-inch hex wrench is required to raise the detent of the launcher and is also the launcher safety pin. To connect the adapter to the umbilical connector, the nose cover of the launcher is pulled out or removed.

### 1-2 AN/ASM-11 GUIDED MISSILE LAUNCHER TEST SET

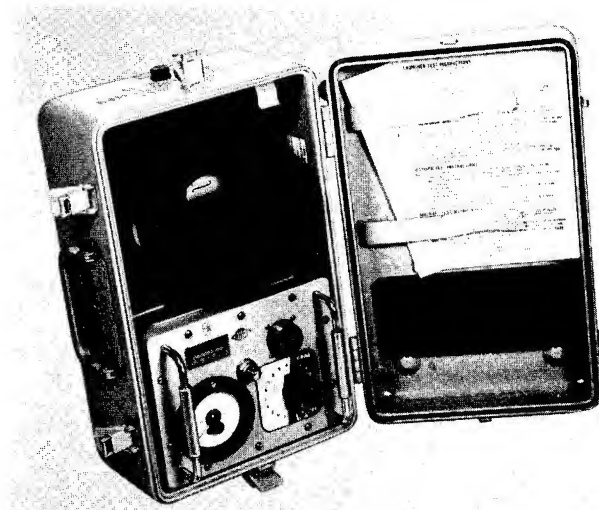


Figure 1-1. Guided Missile Launcher Test Set AN/ASM-11.

**1-2.1 DESCRIPTION.** This test set, figure 1-1, provides a go-no-go determination that the power supplied to the AIM-9B missile, both standby and firing, is within voltage tolerance that the missile firing sequence is operating satisfactorily, and that the firing circuits are safe. In addition, it may be used to show that the aircraft-launcher circuits are operational and that the jettison circuits function satisfactorily.

The AN/ASM-11 test set is contained within a waterproof and shock-resistant carrying case; total weight

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of the set is 25 pounds, including the carrying case. The front panel of the test set is equipped with two handles that afford crash protection as well as handholds in moving the unit from one launcher station to another. The front panel display consists of a pilot light, an indicator meter, a 20-position selector switch, and an electrical connector.

A special purpose electrical cable assembly is furnished as part of the test set. The cable assembly provides the required electrical connections between the test set and the missile launcher or aircraft circuits being tested.

An adapter connector is furnished which is used to adapt the test set cable assembly to the aircraft circuits when the launcher has been removed from the aircraft and disconnected from the aircraft circuitry.

1-2.2 PREFLIGHT TEST OF AERO 3A LAUNCHER. When using the AN/ASM-11 test set to check Aero 3A launcher functions, proceed as follows:

**CAUTION:** Visually check for improper positioning of both forward snubber cams. Return launchers with cracked or broken cams to an O and R facility for repair. Check for free movement when detent is raised. Check the unloading stirrup on the aft end of the Aero 3A launcher to be sure it is properly secured to the launcher and is not bent or deformed in any way. Check firing pin springs by depressing them; also check ceramic or teflon holders of firing pins.

1. Place test set in operating position and observe if the knife edge pointer on the meter is on the extreme left edge of the BLACK area. If this is not true, refer to NAVWEPS 16-30ASM11-1 for calibration instructions.

2. Connect connector P102 of cable assembly to connector J101 on front panel of test set.

### WARNING

Before proceeding, verify that all armament has been removed (both internal and external) from the aircraft.

3. Install safety pin in launcher.

4. Raise detent of launcher with hex wrench and insert lug handle of cable assembly into position on launcher rail, figure 1-2. (The arrow on the lug handle should point in the aircraft forward direction.)

5. Raise launcher nose cover, using hex wrench, and connect P103 to launcher connector (AN-3102E-22-14P), figure 1-3.

6. Energize aircraft circuitry by use of an auxiliary power unit.



Figure 1-2. ASM-11 Test Set Connected to Aero 3A Launcher.

## PREFLIGHT CHECKOUT PROCEDURES

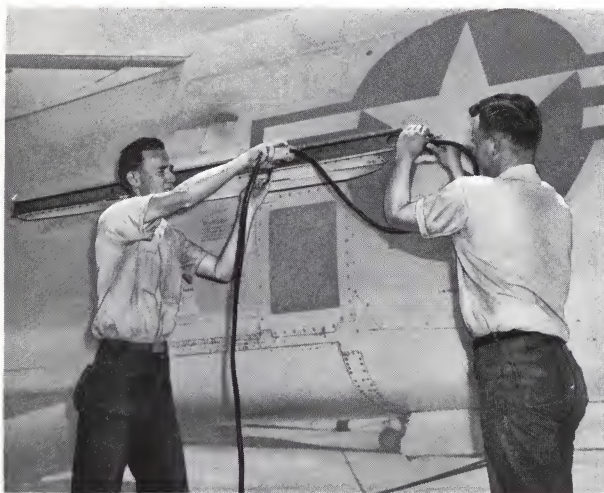


Figure 1-3. Lug Handle Inserted and Cable Assembly Connected.



Figure 1-4. Launcher Test Set Connected and Ready for Launcher Checkout.

**CAUTION:** Do not leave test set in any test position more than 5 minutes.

7. Starting with position 1, turn switch knob through first 10 positions, stopping at position 10. Be sure that knife edge pointer on meter dial is

in the YELLOW area for each of the 10 positions, figure 1-4.

8. With switch knob on position 10, listen for a 400-cycle tone in the pilot's earphones. If the tone is not heard, be sure that the proper cockpit switches are turned on and that the volume is turned up.

9. Turn MASTER ARMAMENT and SAFETY OVERRIDE switches ON.

10. Depress firing switch and hold it down, then

a. Turn switch knob through positions 11, 12, and 13. (The knife edge pointer should read in the RED area.)

b. Next, turn switch knob to position 14. (The knife edge pointer should read in the BLACK area.)

c. Pull safety pin from launcher. (At position 14, the pointer should now be in the RED area.)

11. Release firing switch, and turn MASTER ARMAMENT switch OFF.

12. With safety pin removed, turn switch knob to position 15. (The knife edge pointer should read ZERO (BLACK area), and the pilot light should go out.)

13. With safety pin still removed, turn switch knob to positions 16, 17, and 18. (The knife edge pointer should read in the BLACK area for all three positions.)

14. Turn switch knob to position 19. (The knife edge pointer should read in the YELLOW area.)

15. Turn switch knob to OFF position, and reinsert safety pin in launcher.

1-2.3 PREFLIGHT LAUNCHER JETTISON TEST. This test is performed on the jettison circuitry of the Aero 3A and does not confirm

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any circuits related to the external stores or tanks.

WARNING

Although the following jettison test is for AIM-9B missile circuits only, other aircraft jettison circuits may be energized during this test. Therefore, reaffirm that all ordnance (both internal and external) and other external stores have been removed from the aircraft.

Proceed as follows:

1. Energize aircraft circuitry.
2. Turn test set switch knob to position 14.
3. Perform jettison procedures prescribed for type of aircraft being tested. (The knife edge pointer should be in the RED area.)
4. De-energize jettison circuitry.
5. Turn switch knob through positions 16, 17, and 18. (The knife edge pointer should be in the BLACK area for all three positions.)
6. Turn off, or remove, power; and disconnect test set.

1-2.4 PREFLIGHT AIRCRAFT CIRCUITRY TEST. The following test is made on aircraft when NO missile launchers are on the aircraft.

NOTE: This test cannot be made on an aircraft that does not have a connector MS 3106A-20-27S at or near the launcher station.

1. Connect P102 of cable assembly to J101 of test set.
2. Connect P105 of adapter to connector MS 3106A-20-27S located

in or on aircraft wing or fuselage, or at the bottom of launcher pylon.

3. Connect P103 of cable assembly to P104 of adapter.
4. Energize aircraft circuitry, using an auxiliary power unit.
5. Turn MASTER ARMAMENT and SAFETY OVERRIDE switches ON.
6. Turn switch knob to positions 2, 3, and 10. (The knife edge pointer should read in the YELLOW area for all three positions, and a 400-cycle tone should be heard in the pilot's earphones.)
7. Turn switch knob to position 12.
8. Depress firing switch. (The knife edge pointer should read in the RED area.)
9. Turn power OFF, and disconnect test set.

If the test set at any time, indicates that the aircraft or launcher circuit is not functioning properly, all minor causes for negative results should be eliminated before labeling the aircraft, launcher, or test set as defective. (See paragraph 1-2.5.)

1-2.5 MINOR CAUSES OF NEGATIVE RESULTS. The following information should serve as a guide in establishing the point of existing trouble should the test set, at any time, indicate that the aircraft, or launcher, circuits are not functioning properly:

1. Check test set selector switch to be sure that it is on the correct position.
2. Check connector at J101 and all other connections to be sure that they are correct and electrically secure.
3. Check auxiliary power unit for proper output.

4. Check position of switches in aircraft.

5. If trouble still exists, connect test set to another launcher or aircraft circuit. If the same failure occurs, obtain a new test set and check the troubled position again. Should the same condition remain, change back to the original test set; label the aircraft circuit or launcher as defective; and mark the aircraft circuit or launcher for repair.

6. Should the test set prove to be out of order, mark the test set for repair.

1-2.6 PREFLIGHT TEST OF LAU-7/A LAUNCHER. When using the AN/ASM-11 test set to check the LAU-7/A launcher functions, the procedures are the same as those given in paragraphs 1-2.2 through 1-2.5, except for the following change to paragraph 1-2.2, step 10:

NOTE: In performing these tests, the missile-to-launcher adapter (Part No. 10001-1517359, FSN. VM-5935-885-9397-M558) is required and these instructions apply only to LAU-7/A launchers in which the HVAR receptacle has been removed and the wiring modified.

10. Depress the firing switch and hold it down, then

a. Turn switch knob through positions 11 and 12. (The knife edge pointer will read in the RED area.)

b. Next, turn switch knob through positions 13 and 14. (The knife edge pointer will read in the BLACK area.)

c. Pull safety pin from launcher. (At positions 13 and 14, the pointer will now read in the RED area.)

### 1-3 AN/ASM-20 GUIDED MISSILE LAUNCHER TEST SET

The Aero 3A and LAU-7/A launchers can also be tested for safe operability with the AN/ASM-20 test set, figure 1-5. When checking the LAU-7/A launcher, a special adapter (Part No. 10001-1517359, FSN VM-5935-885-9397-M558) is required in addition to the adapter connectors furnished with the test set.



Figure 1-5. Guided Missile Launcher Test Set AN/ASM-20.

1-3.1 DESCRIPTION. The components of the ASM-20 test set are as follows: (1) transit case, (2) test set, (3) cable assembly, (4) four adapters, (5) pressure gage, and (6) hex wrenches. A pilot's headset, compatible with the aircraft being tested, and an auxiliary power source to energize the aircraft circuitry must be available. One of the adapter connectors (U-216/U) and the pressure gage are not required for preflight testing of AIM-9B missiles. Instruction cards covering all three types of missiles (AIM-9B as well as AIM-9C and AIM-9D) and power supplies required, along with a copy of the handbook (NAVWEPS 16-30ASM-20-1), are included with each test set.

1-3.2 PREFLIGHT LAUNCHER TESTS  
When using the AN/ASM-20 test set

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to check the Aero 3A or LAU-7/A launcher functions, proceed as follows:

CAUTION: Visually check for improper positioning of both forward snubber cams. Return launchers with cracked or broken cams to an O and R facility for repair. Check for free movement when detent is raised. Check the unloading stirrup on the aft end of the Aero 3A launcher to be sure it is properly secured and is not bent or deformed in any way. Check firing pin springs; also check ceramic and teflon holders of firing pins.

1. Place test set in operating position and observe if the knife edge pointer on the meter is on the extreme left edge of the BLACK area. If this is not true, refer to NAVWEPS 16-30ASM20-1-1 for calibration instructions.

2. Remove all electro-explosive device ordnance from aircraft.

3. Insert lug handle of test set cable assembly into launcher.

4. Connect test set cable assembly with appropriate adapter to launcher umbilical connector:

a. For Aero 3A launcher use Adapter U-213/U.

b. For LAU-7/A launcher use Adapter U-213/U with Adapter Part No. 10001-1517359 (FSN VM-5935-885-9397-M558).

5. Place aircraft ARMAMENT SELECTOR switch on SIDEWINDER position.

6. Place aircraft STATION SELECTOR switch on station to be tested.

7. Place test set MISSILE ID switch on 1A position.

8. Apply external auxiliary power to aircraft.

CAUTION: Do not leave test set selector switch in any test position for more than 5 minutes.

## NOTE

a. Pilot light will glow in all positions unless otherwise noted.

b. Test only on 1A test position (A-on code bars).

c. Leave selector switch on position 6 for at least 1 minute prior to continuing tests.

d. Before repeating any test outlined below turn all aircraft switches OFF.

9. a. Aero 3A launcher: Rotate switch to positions 6 through 15. (Meter should read in YELLOW area for each position. When switch is on position 13, a 400-cycle tone should be heard in the pilot's headset. Some aircraft require that the communication system be ON.)

b. LAU-7/A launcher: Rotate switch to positions 6 through 13 and 15. (Meter should read in YELLOW area for each position. When switch is on position 13, a 400-cycle tone should be heard in the pilot's headset. Some aircraft require that the communication system be ON.) Next, rotate switch to position 14. (Meter should read in BLACK area.)

10. Steps 11 through 13 below are omitted if firing circuits are not tested.

11. Install launcher safety pin if not already installed.

12. Turn ON aircraft MASTER ARMAMENT and ARMAMENT SAFETY OVERRIDE switches.

13. Hold firing switch down and rotate switch through the following positions:

## PREFLIGHT CHECKOUT PROCEDURES

a. Aero 3A launcher: Positions 16, 17, 19, 21, and 22. Positions 16, 17, and 19 should read in RED area. Positions 21 and 22 should read in BLACK area. Pull launcher safety pin. Repeat switch positions 21 and 22. Meter should read in RED area. Release firing switch.

b. LAU-7/A launcher: Positions 16 and 17 should read in RED area. Release firing switch. Rotate to positions 19, 21, and 22. Meter should read in BLACK area. Pull launcher safety pin. Repeat switch positions 19, 21, and 22. Meter should read in RED area.

14. Turn aircraft MASTER ARMAMENT switch OFF.

15. Steps 16 through 18 below are omitted if jettison circuit is not tested.

### WARNING

Although the following jettison test is for AIM-9B missile circuits only, other aircraft jettison circuits may be energized during this test. Therefore, reaffirm that all ordnance (both internal and external) and other external stores have been removed from the aircraft.

16. Rotate switch to position 21.

17. Perform jettison test as prescribed for aircraft being tested. (Meter should read in RED area.)

18. De-energize aircraft jettison circuit.

19. Turn aircraft MASTER ARMAMENT switch ON.

20. Rotate switch to position 23. (Meter should read in BLACK area, and pilot light should not glow.)

21. With safety pin removed, rotate switch to positions 24, 26, and

28. (Meter should read in BLACK area.)

22. Rotate switch to position 29. (Meter should read in YELLOW area.)

23. Rotate switch to OFF position.

24. Turn aircraft MASTER ARMAMENT switch OFF and remove external auxiliary power.

25. Replace launcher safety pin before loading missile.

### 1-3.3 PREFLIGHT AIRCRAFT TESTS

Proceed as follows:

1. Remove all electro-explosive device ordnance from aircraft.

2. Connect test set cable assembly with appropriate adapter to pylon connector.

a. For aircraft circuits designed for the Aero 3A launcher use Adapter U-214/U.

b. For aircraft circuits designed for the LAU-7/A launcher use Adapter U-215/U.

3. Place ARMAMENT SELECTOR switch on SIDEWINDER position.

4. Place aircraft STATION SELECTOR switch on station to be tested.

5. Apply external auxiliary power to aircraft.

6. Place MASTER ARMAMENT and ARMAMENT SAFETY OVERRIDE switches in the ON positions.

7. Place MISSILE ID switch in 1A position.

CAUTION: Do not leave test set selector switch in any test position for more than 5 minutes.

### NOTE

a. Pilot light will glow in

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all positions unless otherwise noted.

b. Test only on 1A test position (A—on code bars).

8. Rotate switch to positions 30 and 32. (Meter should read in YELLOW area for each position.)

9. Rotate switch to position 33. Depress firing switch. (Meter should read in YELLOW area.) Release firing switch.

10. To test missile signal:

a. Aero 3A launcher:

Rotate switch to position 34. (an audible signal should be heard in the pilot's headset.)

b. LAU-7/A launcher:

(1) For aircraft circuitry designed to supply input power to Power Supply PP-2581/A, rotate switch to position 34. (An audible signal should be heard on the pilot's headset.)

(2) For aircraft single-phase power used as input power for Power Supply PP-2315/A, rotate switch to positions 34, 36, and 37. (An audible signal should be heard in the pilot's headset for positions 34 and 36.)

(3) For aircraft three-phase power used as input power for Power Supply PP-2315/A, rotate switch to positions 34, 35, and 36. (An audible signal should be heard in the pilot's headset for each position.)

WARNING

Although the following jettison test is for AIM-9B missile circuits only, other aircraft jettison circuits may be energized during this test. Therefore, reaffirm that all ordnance (both internal and external) and other external stores have been removed from the aircraft.

11. Rotate switch to position 38. Perform the jettison test as prescribed for aircraft being tested. (Meter should read in RED area.)

12. De-energize the aircraft armament and jettison circuits.

13. Rotate switch to position 40. (Meter should read in YELLOW area.)

14. Rotate switch to position 42. (Meter should read in BLACK area, and pilot light should not glow.)

15. Rotate switch to OFF position.

16. Remove external auxiliary power.

## Chapter 2

### LOADING AND UNLOADING MISSILE

#### 2-1 LOADING MISSILE ON LAUNCHER

If possible, the aircraft should be pointed away from other aircraft, personnel, and structures. A three-man team is required to load the missile on the launcher. The procedures are given in the following paragraphs.

##### WARNING

Make sure that the firing system cannot be energized during loading operation. Never stand directly behind or in front of a missile that is being loaded onto a launcher. When a missile is loaded on a launcher, all unnecessary personnel should be at least 25 feet from the flank of the launcher and should not be behind the launcher. The loaded launcher is considered dangerous within 200 feet aft. With the exception of the final signal tone, no electrical tests are to be conducted while the missile is on the launcher. The safety pin shall remain in place until the aircraft is ready to catapult. For complete safety, aircraft power should be OFF during loading and unloading of missile.

2-1.1 LOADING MISSILE ON AERO 3A LAUNCHER. The procedure for loading the AIM-9B missile on the Aero 3A launcher is as follows:

**CAUTION:** Never install a missile on the launcher with the NPA on the motor. Failure to remove the NPA will cause critical damage to the aircraft when the missile is launched.

1. Remove NPA from motor.
2. Check that dust cover is on power supply receptacle when umbilical is disconnected, figure 2-1.

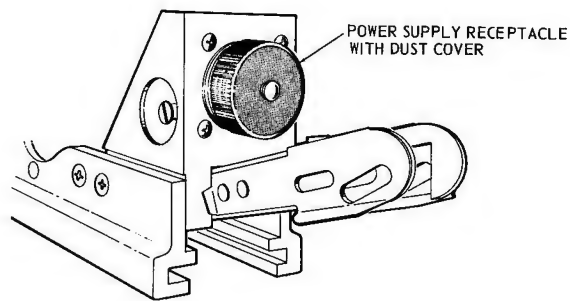


Figure 2-1. Dust Cover on Power Supply Receptacle of Aero 3A Launcher.

**NOTE:** All Aero 3A launchers have a dust cover protecting the power supply receptacle. This dust cover shall always be in place when the umbilical is not connected to the

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power supply. An unprotected power supply receptacle exposed to weather can result in an electrical short in the power supply and cause the launcher to fail.

3. Make certain that aircraft battery and MASTER ARMAMENT switches are OFF and that launcher safety pin is in place, figure 2-2.

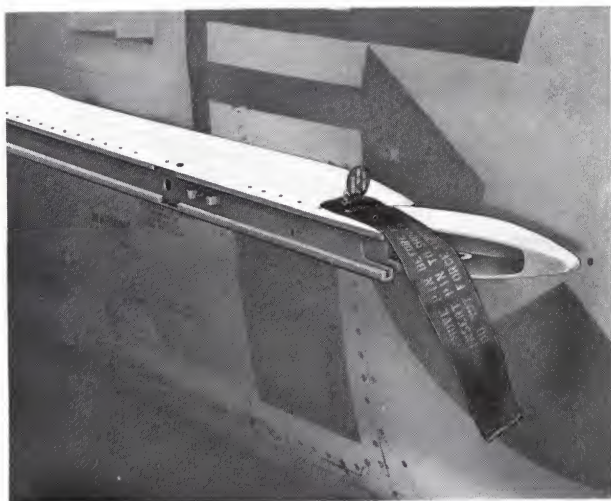


Figure 2-2. Launcher on Aircraft With Safety Pin in Place.



Figure 2-3. AIM-9B Missile Being Loaded Aboard Aircraft.

4. Bring missile into position just outside three loading slots; move missile to engage it in slots.

5. Raise aft lug of detent by rotating it with 3/8-inch hex wrench.

6. Push missile forward about 3 inches, figure 2-3, until forward lug engages detent.

7. Remove wrench from launcher.

8. Unlatch front cover on launcher, remove dust cap, and connect umbilical cord and umbilical disconnect mechanism. Relatch and secure cover.

9. Make certain that snubber cams are in locked position and that safety pin is in place.

10. Just before aircraft moves forward remove protective covers from G&C section and influence fuze, and perform simplified missile checkout given in paragraph 2-2.

2-1.2 LOADING MISSILE ON LAU-7/A LAUNCHER. When possible, the aircraft should be pointed away from other aircraft, personnel, and structures. Proceed as follows:

## WARNING

Do not stand directly in front of or behind the missile during loading operation. Stand clear of the launcher at all times after the missile is loaded on the launcher. Verify the safe condition of the launcher and aircraft before loading the missile on the aircraft by checking each of the following conditions:

- Make certain that safety pin is installed properly.
- Verify that cockpit switches are OFF.
- Verify that aircraft engines are OFF and that auxiliary power is NOT connected to aircraft.

## LOADING AND UNLOADING MISSILE

d. Make certain aircraft is grounded.

**CAUTION:** Never install a missile on the launcher with the NPA on the motor. Failure to remove the NPA will cause critical damage to the aircraft when the missile is launched.

1. Remove NPA from motor.
2. Insert motor hangers into launcher loading slots.
3. Slide missile forward until it hits aft detent lug.
4. Raise detent by rotating detent wrench-safety pin, and slide missile forward until front edge of hanger block engages front detent lug.
5. Lower detent by releasing, but not removing, detent wrench-safety pin.

### WARNING

Failure to seat the detent properly will result in either the missile not firing when the firing button is pressed or in loss of the missile during arrested landing or catapult launching.

6. Check carefully to see that the missile is properly loaded and that the detent is not resting on the firing button of the missile. Two improper conditions are illustrated in figure 2-4.

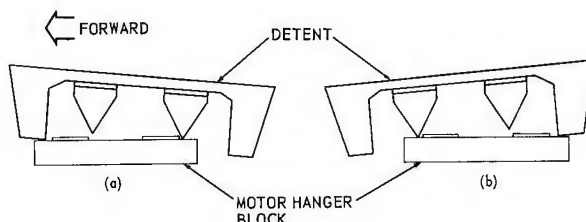


Figure 2-4. Improper Loading Conditions.

a. When the rear leg of the launcher detent is raised with the detent wrench, and the missile is shoved forward too far and with too much force, the front of the motor hanger block will cause the front leg of the launcher detent to rise and come to rest on top of the hanger block (see figure 2-4a). This prevents proper engagement of the launcher detent and prevents the striker points from contacting the firing buttons.

b. Once the launcher detent has been lowered and has engaged the motor hanger block, manual rotation of the detent wrench will force the front leg of the detent to move the missile aft, at the same time raising the rear leg of the detent. When the detent wrench handle is released, the rear leg of the detent will rest on the motor hanger block (see figure 2-4b). This causes disengagement of the detent and prevents the striker points from contacting the firing buttons.

**CAUTION:** Never force a missile onto the launcher. Do not use excessive force or supplemental leverage in depressing the nose latch button.

7. Depress nose latch button and slide nose fairing forward.

8. Check umbilical hook for damage, then attach umbilical hook to missile umbilical block by pushing hook down until it snaps into place over the umbilical-block pin.

**CAUTION:** The forward-receptacle dust cap must be kept in place on the launcher power supply receptacle at all times when the missile is not on the launcher. The upper receptacle dust cap must be

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on the aircraft-pylon receptacle on the launcher top side whenever the launcher is removed from the aircraft.

9. Remove forward-receptacle dust cap shown in figure 2-5, and, using an adapter furnished specifically for the AIM-9B missile, connect missile umbilical cable to launcher power supply receptacle.



Figure 2-5. Forward-Receptacle Dust Cap To Be Removed.

10. Push nose fairing home.

11. Just before aircraft moves forward, remove protective covers from G&C section and influence fuze, and perform the simplified missile checkout given in paragraph 2-2.

**NOTE:** The safety pin IS NOT removed until after the missile has been given the simplified checkout and the aircraft is ready to taxi forward.

If, for some reason, the detent wrench is rotated after the missile is loaded on the aircraft, corrective measures (appendix A) are recommended.

## 2-2 SIMPLIFIED MISSILE CHECKOUT

With the assembled missile on the launcher and with protective covers and NPA removed, but with safety pin still in place on the launcher, check out the missile as follows:

1. Apply power through the aircraft circuits.

2. Inspect to see that gyro in seeker is rotating. If it is not rotating, check missile umbilical connector to see that it is fully engaged in the launcher; also check fuses and switches in the aircraft. If the gyro still fails to rotate, try to start it by moving any magnetic object (such as a bar magnet or a steel tool) clockwise around the head behind the glass dome. If this does not start the gyro, reject the unit.

3. With the gyro rotating, check pilot's tone by passing a portable infrared source, such as a standard two-cell flashlight that has glass lens, not plastic, about 15 feet from the front of the seeker head. If the pilot's headphone is functioning and no audible signal is heard, reject the unit.

4. When the missile passes this simplified checkout and the aircraft is ready to taxi forward, pull the launcher safety pin.

## 2-3 UNLOADING MISSILES FROM LAUNCHER

**2-3.1 UNLOADING MALFUNCTIONING MISSILE.** A malfunctioning missile is one which does not leave the launcher in the normal manner.

### WARNING

Before removing a missile from the launcher, make certain that the battery and aircraft armament switches are OFF and that the safety pin is in place on the launcher.

Proceed as follows:

1. Make certain that battery and aircraft armament switches are OFF.
2. Place safety pin in launcher.
3. Move aircraft to a safe position.
4. If a missile which malfunctioned is aboard, wait 10 minutes from the time that the firing button was last depressed before unloading the missile.
5. Unload missile as indicated in paragraph 2-3.2.

NOTE: BUWEPS INST 8020.6B is to be followed in reporting malfunctions.

2-3.2 UNLOADING LIVE, CAPTIVE-FLIGHT, OR TRAINING MISSILES. The procedure for unloading normal missiles is as follows:

1. Make certain that battery and aircraft switches are OFF.
2. Place safety pin in launcher.
3. Raise detent, using appropriate launcher wrench, to allow the missile to be moved backward to the loading slots.

4. Use care in handling missile so that plastic strip on influence fuze is not damaged (scratched, punctured, or marred) in any way.

5. Place protective covers on G&C section and influence fuze before removing the missile from launcher.

6. Remove missile from launcher, and place NPA on motor.

7. Replace shorting plug on umbilical plug.

8. Examine firing button plastic caps on HERO SAFE motors. If damaged, general HERO safety precautions shall be observed.

9. Move missile to assembly area where components are disassembled, inspected, and segregated or disposed of as described in volume 3, paragraph 2-6.

NOTE: It is recommended that the umbilical cable be secured to the body of the G&C section at all times, except when in use or when testing

Chapter 3  
RECORDS

the Air-Launched Guided Missile Weapon System Performance Data Reporting Program has been established to collect data from representative Fleet squadrons under day-to-day operating conditions. Firings, misses, and malfunctions of the AIM-9B missile are to be reported in accordance

with BUWEPS INST 8810.2 of 7 December 1964. Forms to be used in this program are reproduced as figures 3-1 (4 parts), 3-2 (4 parts), 3-3, and 3-4. Check lists for recording steps of procedure in aircraft check-out and in loading and unloading missiles are given in appendix B.

CONFIDENTIAL (when filled in)									
AIR-TO-AIR MISSILE WEAPON SYSTEM FLIGHT REPORT TYPE I (F4, F3 TYPE A/C) 11ND-FMSAEG-8811/2 (6-64) MAIL TO: OFFICER-IN-CHARGE, U.S. NAVAL FLEET MISSILE SYSTEMS ANALYSIS AND EVALUATION GROUP, CORONA, CALIFORNIA 92720									
BRIEFING DATA									
AIRCRAFT	PILOT	CALL	MISSION	CAP					
				IFF		FREQ CHANNELS			
				I.		III.			
				ALTIMETER		PRESSURE RATIO			
				WEATHER BRIEF					
DIVERT FIELD INFORMATION									
FIELD	BEARING	DISTANCE	TACAN	COMM.					
FLIGHT TIME									
TAKEOFF	MARSHALING INFORMATION								
	BEARING	DISTANCE	ALTITUDE	E. A. C.					
BRIEFING NOTES:									
SQUADRON DATA									
1. NAVY/ MARINE SQUAD	2. SHIP/STATION (TAKEOFF LOCATION)	3. DATE (Month, Day, Year)	4. EVENT NO.	5. SILLABUS CODE					
6. TYPE EX. (Code)	7. AIRCRAFT TYPE	8. A/C BOMB (Last 3 digits)	9. A/C CONFIG. (Code)	10. FLIGHT (GEAR)(Code)	11. CONTROLLER CALL SIGN	12. CONTROL TYPE (Code)	13. BY CHECK (Code)		
MISSION INFORMATION (CODE)		17. PERSONNEL (3 initials)		18. FLIGHT TIME		19. SP III/CW ON		20. A/C LANDING (CODE) (Code)	
14. PROPOSED	15. COMPLETE	16. REASON	PILOT	RIO	HOURS TENTHS	HOURS TENTHS	HOURS TENTHS		
1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND		
DOWNGRADING AT 12-YEAR INTERVALS NOT AUTOMATICALLY DECLASSIFIED GDD DNR 5200.10									
CONFIDENTIAL (when filled in)									

CONFIDENTIAL (when filled in)						
INTERCEPT DATA						
21. RUN NUMBER	1	2	3	4	5	6
22. FIGHTER ALTITUDE						
23. FIGHTER WACH	•	•	•	•	•	•
24. BOGEY ALTITUDE						
25. BOGEY WACH	•	•	•	•	•	•
26. BOGEY TRACK CROSSING ANGLE						
27. DETECTION OPPORTUNITY RANGE						
28. BOGEY AZIMUTH ANGLE						
29. DETECTION RANGE						
30. LOCK-ON RANGE						
31. TYPE OF ATTACK						
32. WEATHER AT FIGHTER						
33. WEATHER AT BOGEY						
34. CONTROLLER NUMBER						
35. ASSESSMENT OF CONTROLLER						
36. RADAR MODE						
37. SWEEP DISPLAY						
38. BOGEY TYPE						
39. BOGEY CHARACTERISTICS						
40. TRACKING						
41. CLUTTER						
42. POLARIZATION						
43. WAS CW ENCOUNTERED						
44. TERRAIN SEA STATE						
45. INTERCEPT RESULTS						
2. SATISFACTORY INTERCEPT 3. SAT. NO. FOR LOCK-ON ATTEMPT 4. COMPLETED REATTACK 5. INCOMPLETE REATTACK 6. NO. FOR INTERCEPT EVALUATION 7. CANCELED BY COMMAND 8. A-1 RADAR 9. TARGET 10. TRANSMITTER 11. PLUG/20 TECH CONSOLE 12. OTHER (EXPLAIN) 13. A-1 OTHER THAN A/C 14. INTERLOCKS NOT SAT. 15. COMPUTER 16. INQUIRY 17. INTERLOCK 18. T-1000 19. T-1000 20. T-1000 21. T-1000 22. T-1000 23. T-1000 24. T-1000 25. T-1000 26. T-1000 27. T-1000 28. T-1000 29. T-1000 30. T-1000 31. T-1000 32. T-1000 33. T-1000 34. T-1000 35. T-1000 36. T-1000 37. T-1000 38. T-1000 39. T-1000 40. T-1000 41. T-1000 42. T-1000 43. T-1000 44. T-1000 45. T-1000 46. T-1000 47. T-1000 48. T-1000 49. T-1000 50. T-1000 51. T-1000 52. T-1000 53. T-1000 54. T-1000 55. T-1000 56. T-1000 57. T-1000 58. T-1000 59. T-1000 60. T-1000 61. T-1000 62. T-1000 63. T-1000 64. T-1000 65. T-1000 66. T-1000 67. T-1000 68. T-1000 69. T-1000 70. T-1000 71. T-1000 72. T-1000 73. T-1000 74. T-1000 75. T-1000 76. T-1000 77. T-1000 78. T-1000 79. T-1000 80. T-1000 81. T-1000 82. T-1000 83. T-1000 84. T-1000 85. T-1000 86. T-1000 87. T-1000 88. T-1000 89. T-1000 90. T-1000 91. T-1000 92. T-1000 93. T-1000 94. T-1000 95. T-1000 96. T-1000 97. T-1000 98. T-1000 99. T-1000 100. T-1000						
11ND-FMSAEG-8811/2 (6-64)						
CONFIDENTIAL (when filled in)						

Figure 3-1. Air-to-Air Missile Weapon System Flight Report, Type I,  
11ND-FMSAEG-8811/2 (6-64) (Parts 1 and 2).

**CONFIDENTIAL** (when filled in)

## FIRING DATA

47. INTERCEPT RUN NUMBER							WRITE IN APPLICABLE INTERCEPT RUN NUMBER
48. LAUNCHER STATION CODE							WRITE IN LAUNCHER STATION CODE FROM MISSILE IO SECTION (COL. 45)
49. TYPE FIRING							A - ACTUAL OR ATTEMPTED (SINGLE) B - ACTUAL OR ATTEMPTED (BUNDLE) C - SIMULATED
50. FIRING RANGE	•	•	•	•	•	•	REPORT TO NEAREST TENTH IN NAUTICAL MILES (EXAMPLE: 3.5)
51. ASPECT TO BOGEY HEADING							REPORT IN DEGREES (EXAMPLE: TAIL ON HEAD ON - 180°)
52. FIGHTER ALTITUDE							REPORT IN FEET (TO NEAREST HUNDRED)
53. FIGHTER MACH	•	•	•	•	•	•	REPORT IN NEAREST HUNDRETH (EXAMPLE: 1.63 OR 0.85)
54. FIGHTER MANEUVER							A - NORMAL TURN F - NONE B - PUSH OVER C - SNAP UP D - HIGH G TURN
55. BOGEY ALTITUDE							REPORT IN FEET (TO NEAREST HUNDRED)
56. BOGEY MACH	•	•	•	•	•	•	REPORT TO NEAREST HUNDRETH (EXAMPLE: 1.63 OR 0.85)
57. MISS OISTANCE							REPORT IN FEET (TELEMETERED OR ESTIMATED) OR USE CODE A - CORRECT HIT B - OTHER (EXPLAIN) C - BALLISTIC
58. FUZE OR WARHEAD ACTION							A - NORMAL B - NONE C - OTHER (EXPLAIN) GIVE TIME OR DISTANCE FROM LAUNCH
59. LAUNCH ACTION							A - NORMAL B - ACCIDENTAL F - JETTISON C - MISFIRE (EXPLAIN) (EXPLAIN) D - TELEMETRY E - OTHER (EXPLAIN)
60. HOW WAS MISSILE ASSESSED							THIS SPACE NOT FOR SQUADRON USE.
61. FMSAEG EVALUATION							

## SPARROW III SUPPLEMENT

62. MISSILE MODE							A - HARBOR GATE B - WIDE GATE C - OTHER (EXPLAIN)
63. FIRING PROCEDURE							A - NORMAL FIRING B - BORE SIGHT C - INTERLOCKS OUT (OVERRIDE) D - MANUAL TRACK
64. WEATHER AT FIRING							A - CAVU B - OTHER (EXPLAIN)

## SIDEWINDER SUPPLEMENT

65. BACKGROUND AFFECTING GUIDANCE							A - NONE B - CLOUD C - SUN D - OTHER (EXPLAIN)
-----------------------------------	--	--	--	--	--	--	---

## MALFUNCTION ANALYSIS - POST FLIGHT

66. MISSILE MALFUNCTION							
67. LAUNCHER MALFUNCTION							USE CODES FROM AAMREP CODE SHEET AND EXPLAIN (IN REMARKS)
68. AWC'S MALFUNCTION							AS REQUIRED

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## MISSILE IDENTIFICATION DATA

SP III AND S/W		SPARROW III		SIDEWINDER	
LAUNCHER STATION	LOCATION (ALL MISSILES) (ALL AIRCRAFT)	74. GUIDANCE AND CONTROL UNIT	75. GUIDANCE AND CONTROL UNIT	76. GUIDANCE AND CONTROL UNIT	LAUNCHER BOTTLE PRESSURE (S/W - IC)
70. CODES	71. WARHEAD TYPE	72. SELECT LIGHT	73. READY LIGHT	74. FUZE TYPE	75. TAKEOFF (P/T/G)
76. RUN NUMBER LIGHTS (S/W)	77. SEEKER SERIAL NUMBER	78. CONTROL SERIAL NUMBER	79. SERIAL NUMBER	80. INDICATE P OR G	81. LAUNCHING (P/T/G)
A. PORT WING OUTBOARD OR SINGLE					
B. PORT WING INBOARD					
C. PORT FUSELAGE FORWARD OR SINGLE					
D. PORT FUSELAGE AFT.					
E. STBD FUSELAGE AFT.					
F. STBD FUSELAGE FWD. OR SINGLE					
G. STBD WING INBOARD					
H. STBD WING OUTBOARD OR SINGLE					

\*Use codes from AAMREP Code Sheet.

REMARKS: Use this space for necessary explanations as indicated by instructions, coding requirements and in instances where coding seems inadequate.

11ND-FMSAEG-8811/2 (6-64)

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Figure 3-1. Air-to-Air Missile Weapon System Flight Report, Type I,  
11ND-FMSAEG-8811/2 (6-64) (Parts 3 and 4).

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AIR-TO-AIR MISSILE WEAPON SYSTEM FLIGHT REPORT

TYPE II (PB, A4, A6 TYPE 9-C)

11ND-FMSAEG-8811/4 (12-64) Previous editions obsolete.

MAIL TO: OFFICER-IN-CHARGE, U.S. NAVAL FLEET MISSILE SYSTEMS ANALYSIS AND EVALUATION GROUP,  
CORONA, CALIFORNIA 92720

BRIEFING DATA

AIRCRAFT	PILOT	CALL	MISSION	CAP
			IFF	FREQ. CHANNELS
			I. III.	
			ALTIMETER	PRESSURE RATIO
			WEATHER	

DIVERT FIELD INFORMATION

FIELD	BEARING	DISTANCE	TACAN	COMM.

FLIGHT TIME

TAKE OFF

LANDING

BRIEFING NOTES:

MARSHALING INFORMATION

BEARING	DISTANCE	ALTITUDE	E. A. C.
WARSHAL			
EMERGENCY			
WARSHAL			

SQUADRON DATA

1. NAVY/MARINE SQDN.	2. SHIP/STATION (TAKEDOFF LOCATION)	3. DATE (MO, DAY, YR)	4. EVENT NO.
5. SYLLABUS CODE	6. TYPE (X)	7. AIRCRAFT TYPE	8. A/C BUHO (LAST 5 DIGITS)
MISSION INFORMATION (CODE)		9. FLY GEAR (CODE)	10. CONTROLLER CALL SIGN
		11. CONTROL TYPE (CODE)	
		12. PROPOSED	13. COMPLETION
		14. REASON	
		15. PILOT (3 INITIALS)	16. FLIGHT TIME (HOURS TENTHS)
		17. A/C LANDING CONDITION (CODE)	

DOWNGRADING AT 12-YEAR INTERVALS  
NOT AUTOMATICALLY DECLASSIFIED  
DOD DIR 5300.10

CONFIDENTIAL (when filled in)

CONFIDENTIAL (when filled in)

INTERCEPT DATA

18. INTERCEPT RUN NUMBER	1	2	3	4	5	6	INSTRUCTIONS AND CODING
19. FIGHTER ALTITUDE							REPORT IN FEET (TO NEAREST HUNDRED)
20. FIGHTER MACH							REPORT TO NEAREST HUNDREDTH (EXAMPLE: 1.21 OR 0.85)
21. TERRAIN SEA STATE							FOR RUNS BELOW 5000 FEET A-DESERT F-FLAT/FLYWAYS B-FLATLAND F-MOUNTAINS C-JUNGLE H-WOODS 1, 2, 3, 4, 5, 6 - SEA STATE
22. WEATHER AT FIGHTER							A-CLOUDS F-THUNDER/STORMS B-CLOUDS F-THUNDER/STORMS C-RAIN F-OTHER (EXPLAIN)
23. CONTROLLER NUMBER							GIVE APPROPRIATE IDENTIFICATION NUMBER ASSIGNED TO CONTROLLER A-NO CONTROLLER B-NO ERROR C-HEARING ERR. DEGREES (F.F. 015) D-ALTITUDE ERR. FEET (EX. F1000) E-RANGE ERR. MILES (EX. 10)
24. ASSESSMENT OF CONTROLLER							F-VISUAL G-AROUND H-NORMAL I-OTHER (EXPLAIN) J-F.T.C.
25. RADAR MODE							REPORT IN DEGREES AT DETECTION
26. BOGEY ASPECT ANGLE							REPORT IN NAUTICAL MILES
27. DETECTION OPPORTUNITY RANGE							REPORT IN NAUTICAL MILES (TO NEAREST HUNDRED)
28. BOGEY ALTITUDE							REPORT TO NEAREST HUNDREDTH (EXAMPLE: 1.21 OR 0.85) REPORT V <sub>2</sub> IF MACH IS UNKNOWN (EXAMPLE: 1.200-KNOTS)
29. BOGEY MACH							REPORT IN NAUTICAL MILES
30. DETECTION RANGE							REPORT IN NAUTICAL MILES
31. LOCK-ON RANGE							REPORT IN NAUTICAL MILES
32. WEATHER AT BOGEY							A-CLOUDS F-SHOW G-THUNDER/STORMS B-RAIN F-OTHER (EXPLAIN)
33. WAS CW ENCOUNTERED							A-YES B-NO IF YES, FILL OUT SUPPLEMENT CW CARD AND ATTACH TO THIS FORM.
34. BOGEY TYPE							USE CODES BELOW
35. BOGEY CHARACTERISTICS							A-AUGMENTED/NOT MANEUVERED B-AUGMENTED/NOT MANEUVERED C-UNARMED/NOT MANEUVERED E-UNARMED/NOT MANEUVERED
36. INTERCEPT RUN RESULTS							USE CODES BELOW. ALL CODES OTHER THAN A, B, AND F INDICATE TROUBLE AND MUST BE EXPLAINED IN REMARKS.

CODES FOR ITEM 34 - BOGEY TYPE

AIRCRAFT TYPES	OTHER THAN A/C TYPES
A-A4 B-F4B, F4C C-F3B E-F8 F-F10, F104, F105 G-F102, F106 H-B52, KC135, 707, DC8 K-F4A L-F10B P-F16, F2A	B-A3A T-A3 X-OTHER (EXPLAIN)
1-DELTA 2-ADM-27A 3-ORF 4-POGO 5-HVAC 6-ADM-34 7-PARA FLARE 8-ADM-34A 9-ADM-34A X-OTHER (EXPLAIN)	

CODES FOR ITEM 36 - INTERCEPT RUN RESULTS

A-SATISFACTORY INTERCEPT B-SAT-NO RDR LOCK ATTEMPT F-CANCELED BY COMMAND G-AI RADAR M-TARGET N-IR SET O-INTERLOCKS NOT SAT. P-COMPUTER Q-PILOT TECHNIQUE R-A/C (OTHER THAN ANCS)	1-AIR CONTROL 2-INTERMITTENT 3-RADAR LOCK 4-OTHER (EXPLAIN)
---	--

THIS LINE NOT FOR SQUADRON USE

11ND-FMSAEG-8811/4 (12-64)

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Figure 3-2. Air-to-Air Missile Weapon System Flight Report, Type II, 11ND-FMSAEG-8811/4 (12-64) (Parts 1 and 2).

3-2

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FIRING DATA									
38. INTERCEPT RUN NUMBER									WRITE IN APPLICABLE INTERCEPT RUN NUMBER
39. LAUNCHER STATION CODE									WRITE IN LAUNCHER STATION CODE FROM MISSILE ID SECTION (COL. 37)
40. TYPE OF FIRING									A. ACTUAL OR ATTEMPTED (SINGLE) B. ACTUAL OR ATTEMPTED (RIPPLE) C. SIMULATED
41. FIRING RANGE									REPORT TO NEAREST TENTH IN NAUTICAL MILES (EXAMPLE: 2.3)
42. ASPECT TO BOGEY HEADING									REPORT IN DEGREES (EXAMPLE: TAIL ON - 0° HEAD ON - 180°)
43. FIGHTER ALTITUDE									REPORT IN FEET (TO NEAREST HUNDRED)
44. FIGHTER MACH									REPORT TO NEAREST HUNDRETH (EXAMPLE: 1.43 OR 0.85)
45. FIGHTER MANEUVER									A. NORMAL TURN F. NONE B. PUSH OVER C. SNAP UP D. HIGH "G" TURN
46. BOGEY ALTITUDE									REPORT IN FEET (TO NEAREST HUNDRED)
47. BOGEY MACH									REPORT TO NEAREST HUNDRETH (EXAMPLE: 1.43 OR 0.85)
48. MISS DISTANCE									REPORT IN FEET (TELEMETERED OR ESTIMATED) OR USE CODES A. DIRECT HIT X. OTHER (EXPLAIN) B. BALLISTIC
49. FUZE/WAR - HEAD ACTION									A. NORMAL B. NONE X. OTHER (EXPLAIN, GIVE TIME OR DISTANCE FROM LAUNCH)
50. LAUNCH ACTION									A. NORMAL B. ACCIDENTAL F. JETTISON C. MISFIRE (MISSILE EXPENDED) D. MISFIRE (MISSILE NOT EXPENDED)
51. HOW WAS MISSILE ASSESSED									A. EYEBALL B. TELEMETRY X. OTHER (EXPLAIN)
52. BACKGROUND AFFECTING GUIDANCE									A. NONE B. CLOUD C. SUN X. OTHER (EXPLAIN)
53. FMSAEG EVALUATION									THIS LINE IS NOT FOR SQUADRON USE

**MALFUNCTION ANALYSIS - POSTFLIGHT**

54. MISSILE MALFUNCTION									
55. LAUNCHER MALFUNCTION									USE CODES FROM AAMREP CODE SHEET AND EXPLAIN (IN REMARKS) AS REQUIRED.
56. AMCS MALFUNCTION									

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**MISSILE IDENTIFICATION DATA**

LAUNCHER STATION		38. TONE (Use codes as right)		39. TONE (Use codes as right)		40. TONE (Use codes as right)		41. TONE (Use codes as right)		42. GUIDANCE AND CONTROL SECTION		LAUNCHER BOTTLE PRESSURE (S.W.-IC)		CODES FOR COLUMNS 58, 59, 60 & 61	
57. CODE	LOCATION	38. TONE	39. TONE	40. TONE	41. TONE	42. GUIDANCE AND CONTROL SECTION	43. TAKE-OFF	44. TAKE-OFF	45. TAKE-OFF	46. TAKE-OFF	47. TAKE-OFF	48. TAKE-OFF	49. TAKE-OFF	50. TAKE-OFF	51. TAKE-OFF
A	PORT WING														
C	PORT FUSELAGE UPPER OR SINGLE														
D	PORT FUSELAGE LOWER														
E	STBD FUSELAGE LOWER														
F	STBD FUSELAGE UPPER OR SINGLE														
H	STBD WING														

REMARKS: Use this space for necessary explanations as indicated by instructions, coding requirements, and instances where coding seems inadequate.

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Figure 3-2. Air-to-Air Missile Weapon System Flight Report, Type II, 11ND-FMSAEG-8811/4 (12-64) (Parts 3 and 4).

CODE SHEET FOR TYPE I (F4, F3, TYPE A/C) AIR-TO-AIR MISSILE WEAPON SYSTEM FLIGHT REPORT	
IT IS CONSIDERED FEASIBLE FOR THE CODES ON THIS SHEET TO BE ENTERED ON THE AAMREP FORM PRIOR TO OR IMMEDIATELY FOLLOWING THE MISSION. FOR THOSE ITEMS WHICH SHOULD BE CODED DURING FLIGHT, CODES WILL APPEAR DIRECTLY ON THE FORM.	
NOTE: Use a dash (-) in all cases in which the item is not applicable.	
<b>SQUADRON DATA</b>	<b>INTERCEPT DATA</b>
<b>6. TYPE OF EXERCISE</b> A - AAWEX B - MISSEX C - LANT MISSEX E - WESTPAC MISSEX F - MIDPAC MISSEX G - EASTPAC MISSEX H - MED MISSEX K - PREWEP TRAEX L - WEPTRAEX P - COMPEX R - NORMAL TRAINING T - O. R. I. X - OTHER (EXPLAIN)	<b>38. BOGEY TYPE</b> <b>AIRCRAFT TYPES</b> A - A4 B - F4B, F4C C - F3B E - F8 F - F101, F104, F105 G - F102, F106 H - B52, KC135, 707, DC8 K - EA6A L - EF10B P - E1B, E2A R - A3A T - A5 X - OTHER (EXPLAIN)
<b>14. MISSION PROPOSED</b> NON-WEAPON SYSTEM TYPE 3 - ANY NON-WEAPON TYPE WEAPON SYSTEM TYPE A - SPARROW III LAUNCH B - SIDEWINDER LAUNCH C - SP III + S/W LAUNCH E - AIR-TO-AIR SUPERIORITY F - COMBAT AIR PATROL G - ESCORT FIGHTER H - INTERCEPT TRAINING K - SPECIAL WEAPONS L - RESEARCH AND DEVELOPMENT P - SCRAMBLE R - CM FLIGHT TEST X - OTHER (EXPLAIN)	<b>OTHER THAN A/C TYPES</b> 2 - DELMAR 3 - AQM-37A 4 - QF9F 5 - POGO 6 - HVAR 7 - AQM-34 8 - PARA FLARE 9 - BQM-34A X - OTHER (EXPLAIN)
<b>9. AIRCRAFT TANK CONFIGURATION</b> 1 - ONE TANK 2 - TWO TANKS 3 - THREE TANKS 4 - CLEAN (NO TANKS) X - OTHER (EXPLAIN)	
<b>10. FLIGHT GEAR</b> A - NORMAL B - EXPOSURE SUIT C - PRESSURE SUIT	
<b>12. TYPE OF CONTROLLER</b> A - MISSILE RANGE - RADAR B - SELF CONTROLLED C - CIC E - GCI T - MULTIPLE (EXPLAIN) X - OTHER (EXPLAIN)	
<b>DATA LINK</b> F - ATDS G - SAGE H - MTDS J - NTDS	
<b>VOICE</b> K - MTDS L - NTDS M - SAGE P - ATDS R - WF-2	
<b>13. BIT CHECK</b> AA - SAT PERFORMANCE BB - NOT PERFORMED UNSAT BITS 8A - BIT ZERO - B+ 8B - BIT ZERO - DISPLAY 1C - BIT ONE - DETECTION 1D - BIT ONE - ACQUISITION 1E - BIT ONE - COMP 2F - BIT TWO - RANGE TRACK 2G - BIT TWO - COMP 3H - BIT THREE - ANGLE TRACK 4J - BIT FOUR - COMP 4K - BIT FOUR - ADJ/HOJ 5L - BIT FIVE - COMP 6M - BIT SIX - COMP 7W - BIT SEVEN - IR 9X - MULTIPLE UNSAT BITS (EXPLAIN)	
<b>15. MISSION COMPLETION</b> A - COMPLETED B - PARTIALLY COMPLETED C - NOTHING COMPLETED E - AIRCRAFT NOT LAUNCHED	
<b>16. REASON FOR DEGREE COMPLETED</b> A - SAT COMPLETION B - TM OR INSTRUMENT TROUBLE C - MISSILE TROUBLE E - LAUNCHER TROUBLE F - CANCELLED BY COMMAND G - AI RADAR TROUBLE H - TARGET TROUBLE J - CW TRANSMITTER TROUBLE K - IR SET TROUBLE M - COMPUTER TROUBLE P - RADIO AND COMMUNICATION TROUBLE R - A/C TROUBLE (OTHER THAN AMCS) T - AIR CONTROL TROUBLE X - OTHER (EXPLAIN)	
<b>20. AIRCRAFT LANDING CONDITION</b> A - UP DOWN BECAUSE OF: B - AIRFRAME C - ORDNANCE E - ELECTRONICS F - POWER PLANT T - MULTIPLE (EXPLAIN) X - OTHER (EXPLAIN)	
	<b>MALFUNCTION ANALYSIS - POST FLIGHT</b>
	<b>66. MISSILE MALFUNCTION</b> A - CHECKS SAT B - IGNITER SAFE/ARM NOT ARMED (SP III) C - SAFETY PIN NOT REMOVED  CHECKS UNSAT (USE FOLLOWING CODES AND EXPLAIN TYPE OF TEST EQUIPMENT USED) E - HEAD HYDRAULICS STREAMED (SP III) F - EPU/BATTERY FIRED (SP III) G - HPU FIRED (SP III) H - GAS GRAIN FIRED (S/W) K - NITROGEN PRESSURE TROUBLE (S/W-1C) T - MULTIPLE (EXPLAIN) X - OTHER (EXPLAIN)
	<b>67. LAUNCHER MALFUNCTION</b> A - CHECKS SAT B - MOTOR FIRE LEAD IMPROPERLY CONNECTED (SP III) C - SAFETY PIN NOT REMOVED (SP III) E - LAUNCHER CHECKS UNSAT (EXPLAIN)
	<b>68. AMCS MALFUNCTION</b> A - CHECKS SAT B - VERTICAL GYRO G - AI RADAR TROUBLE J - CW ILLUMINATOR K - IR SET TROUBLE M - COMPUTER TROUBLE T - MULTIPLE (EXPLAIN) X - OTHER (EXPLAIN)
	<b>MISSILE IDENTIFICATION DATA</b>
	<b>70. GIVE RUN NUMBER OR CODE NUMBER (BELOW) ON WHICH TONE WAS CHECKED UNSAT.</b> 7 - ALL RUNS 8 - DECK ONLY X - OTHER (EXPLAIN)
	<b>71. WARHEAD TYPE - (SPARROW III AND SIDEWINDER)</b> A - EXERCISE (SPOTTING CHARGE) B - LIVE (EXPLOSIVE) C - INERT E - TM X - OTHER (EXPLAIN)
	<b>72, 73, &amp; 75. SPARROW III SELECT LIGHT AND READY LIGHT AND SIDEWINDER TONE</b> A - YES B - NO (FAILURE) C - INTERMITTENT E - YES ON DECK NO IN AIR F - TUNED UP LATE G - NOT CHECKED X - OTHER (EXPLAIN)
	<b>76. FUZE TYPE</b> A - MK 322 B - MK 323

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Figure 3-3. Form 11ND-FMSAEG-8811/3 (6-64).

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**CODE SHEET FOR TYPE II (F8, A4, A6 TYPE A/C)**  
**AIR-TO-AIR WEAPON SYSTEM FLIGHT REPORT**

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CODES ON THIS SHEET MAY BE ENTERED ON THE AAMREP FORM PRIOR TO OR IMMEDIATELY FOLLOWING THE FLIGHT. OTHER CODES WILL APPEAR DIRECTLY ON THE AAMREP FORM.

*NOTE: Use a dash (-) in all cases in which the item is not applicable.*

**SQUADRON DATA**

<b>6. TYPE OF EXERCISE</b> A - AAWEX B - MISSEX C - LANT MISSEX E - WESTPAC MISSEX F - MIDPAC MISSEX G - EASTPAC MISSEX H - MED MISSEX K - PREWEP TRAEX L - WEPTRAEX P - COMPEX R - NORMAL TRAINING T - O. R. I X - OTHER (EXPLAIN)	<b>12. MISSION PROPOSED</b> NON-WEAPON SYSTEM TYPE 3 - ALL NON-WEAPON TYPE  WEAPON SYSTEM TYPE A - SPARROW III LAUNCH B - SIDEWINDER LAUNCH C - SP III + S/W LAUNCH E - AIR-TO-AIR SUPERIORITY F - COMBAT AIR PATROL G - ESCORT FIGHTER H - INTERCEPT TRAINING K - SPECIAL WEAPONS L - RESEARCH AND DEVELOPMENT P - SCRAMBLE R - CM FLIGHT TEST X - OTHER (EXPLAIN)	<b>14. REASON FOR DEGREE OF COMPLETION</b> A - SAT COMPLETION B - TM OR INSTRUMENT TROUBLE C - MISSILE TROUBLE E - LAUNCHER TROUBLE F - CANCELLED BY COMMAND G - AI RADAR TROUBLE H - TARGET TROUBLE J - CW TRANSMITTER TROUBLE K - IR SET TROUBLE M - COMPUTER TROUBLE P - RADIO & COMMUNICATION TROUBLE R - A/C TROUBLE (OTHER THAN AMCS) T - AIR CONTROL TROUBLE X - OTHER (EXPLAIN)
<b>9. FLIGHT GEAR</b> A - NORMAL B - EXPOSURE SUIT C - PRESSURE SUIT	<b>13. MISSION COMPLETION</b> A - COMPLETED B - PARTIALLY COMPLETED C - NOTHING COMPLETED E - AIRCRAFT NOT LAUNCHED	<b>17. AIRCRAFT LANDING CONDITION</b> A - UP  DOWN BECAUSE: B - AIRFRAME C - ORDNANCE E - ELECTRONICS F - POWER PLANT T - MULTIPLE (EXPLAIN) X - OTHER (EXPLAIN)
<b>11. TYPE OF CONTROLLER</b> A - MISSILE RANGE - RADAR B - SELF CONTROLLED C - CIC E - GCI T - MULTIPLE (EXPLAIN) X - OTHER (EXPLAIN)		

**DATA LINK**  
 F - ATDS  
 G - SAGE  
 H - MTDS  
 J - NTDS

**VOICE**  
 K - MTDS  
 L - NTDS  
 M - SAGE  
 P - ATDS  
 R - WF-2

**MAL FUNCTION ANALYSIS - POSTFLIGHT**

<b>54. MISSILE</b> A - CHECKS SAT H - GAS GRAIN FIRED K - NITROGEN PRESSURE TROUBLE (S/W - IC) T - MULTIPLE (EXPLAIN) X - OTHER (EXPLAIN)	<b>55. LAUNCHER</b> A - CHECKS SAT E - CHECKS UNSAT (EXPLAIN)	<b>56. AMCS</b> A - CHECKS SAT G - AI RADAR TROUBLE K - IR SET TROUBLE M - COMPUTER TROUBLE T - MULTIPLE (EXPLAIN) X - OTHER (EXPLAIN)
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Figure 3-4. Form 11ND-FMSAEG-8811/5 (6-64).

## Appendix A

### MEASURES FOR CORRECTING DETENT WRENCH ROTATION

Some reports have indicated that the detent wrench on the LAU-7/A launcher has been rotated after the missile was secured to the aircraft. If this condition is prevalent, the following corrective measures are recommended:

1. Shorten detent wrench handle as follows:

- a. Remove 4 1/2 inches from end of detent wrench handle.
- b. Relocate flag on remaining portion of handle.
- c. Use crescent wrench to turn shortened wrench handle when required in missile assembly to launcher.

2. Mark launcher as follows:

- a. Scribe a vertical line on each side of launcher in line with center of front striker point.
- b. Paint a 2-inch-long vertical

black stripe 3/8 inch wide from scribe line forward on each side of launcher so scribed line becomes aft edge of black stripe.

3. Load missile on launcher as follows:

- a. Insert motor hangers into launcher loading slots.
- b. Raise detent by rotating detent wrench— safety pin and slide missile forward until front edge of hanger block is within the black stripe on launcher.
- c. Lower detent by releasing, but not removing, detent wrench— safety pin.
- d. Slide missile forward engaging detent. When engaged, the detent wrench rotates counterclockwise.
- e. Complete missile assembly as given in paragraph 2-1.2.

## Appendix B CHECK LISTS

### B-1 AN/ASM-11 CHECKOUT OF AERO 3A LAUNCHER

Ref: NAVWEPS OP 2309, Volume  
4, Third Revision, paragraphs  
1-2.2 through 1-2.4.

Tools: 3/8-inch hex wrench

#### 1. Launcher checked:

- a. Forward snubber cams have no hairline cracks on outer edges. ☐
- b. With detent raised, free movement. ☐
- c. Unloading stirrup secured properly and no dents or any deformation to stirrup. ☐
- d. Safety pin installed. ☐

#### 2. Aircraft checked:

- a. All armament (both internal and external) removed. ☐

#### 3. Test procedures:

NOTE: With test set in position, knife edge pointer in extreme left edge of BLACK area.

- a. Cable assembly P102 connected to test set J101. ☐
- b. With detent raised, cable assembly lug handle inserted in position on launcher rail. ☐
- c. With launcher nose cover raised, P103 connected to launcher connector (AN-3102E-22-14P). ☐
- d. Auxiliary power connected; aircraft circuits energized. ☐

- e. Switch turned through first 14 positions. YELLOW in each position. ☐

- f. On position 10, 400-cycle tone heard in pilot's earphones. ☐

- g. MASTER ARMAMENT and SAFETY OVER-RIDE switches ON. ☐

- h. Firing switch depressed,
  - (1) Switch through positions 11, 12, and 13. RED. ☐
  - (2) Switch to position 14. BLACK. ☐
  - (3) Safety pin pulled; position 14 read again. RED. ☐

- i. Firing switch released; MASTER ARMAMENT switch OFF. ☐

- j. With safety pin removed, switch to position 15. BLACK, and pilot light out. ☐

- k. With safety pin removed, switch through positions 16, 17, and 18. BLACK. ☐

- l. Switch to position 19. YELLOW. ☐

- m. Switch OFF; safety pin reinserted. ☐

### B-2 AN/ASM-11 JETTISON TEST OF AERO 3A LAUNCHER

- 1. All ordnance (both internal and external) and other external stores removed from aircraft. ☐
- 2. Aircraft circuitry energized. ☐
- 3. Jettison test for applicable aircraft performed. Knife edge pointer in RED area. ☐
- 4. Jettison circuitry de-energized. ☐

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5. Switch turned through positions 16, 17, and 18. BLACK for each position. ☐

6. Power turned off, or removed; test set disconnected. ☐

### B-3 AN/ASM-11 AIRCRAFT CIRCUIT TEST OF AERO 3A LAUNCHER

NOTE: Aircraft must have connector MS 3106A-20-27S at or near launcher station.

1. Cable assembly P102 connected to test set J101. ☐
2. P105 of adapter connected to MS 3106A-20-27S. ☐
3. Cable assembly P103 connected to adapter P104. ☐
4. Aircraft circuitry energized with auxiliary power unit. ☐
5. MASTER ARMAMENT and SAFETY OVERRIDE switches ON. ☐
6. Switch turned through positions 2, 3, 10. YELLOW at all positions; 400-cycle tone heard in pilot's ear-phones. ☐
7. Switch turned to position 12. ☐
8. Firing switch depressed, RED on position 12. ☐
9. Power turned OFF; test set disconnected. ☐

### B-4 LOADING MISSILE ON AERO 3A LAUNCHER

Ref: NAVWEPS OP 2309, Volume 4, Third Revision, paragraph 2-1.1.

Tools: 3/8-inch hex wrench; two-cell flashlight.

1. Preliminary checks: ☐
  - a. Aircraft battery and MASTER ARMAMENT switches OFF. ☐

- b. Aircraft engines OFF. ☐

- c. Safety pin in place. ☐

- d. NPA removed from motor. ☐

- e. Dust cover on power supply receptacle of launcher. ☐

### 2. Loading procedures:

- a. With missile just outside three loading slots, missile moved to engage it in slots. ☐

- b. Aft lug of detent is raised by rotating with wrench. ☐

- c. Missile pushed forward 3 inches; forward lug engaged detent. ☐

- d. Wrench removed from launcher. ☐

- e. Launcher front cover unlatched, dust cap removed, umbilical cord and umbilical disconnect mechanism connected. Launcher front cover relatched and secured. ☐

- f. Snubber cams locked in position; safety pin still in place. ☐

- g. Covers removed from G&C section and fuze (just before aircraft moves forward). ☐

### 3. Simplified missile checkout made:

- a. Power applied through aircraft circuits. ☐

- b. Gyro is rotating. ☐

- c. With gyro rotating, two-cell flashlight with glass lens passed in front of seeker head. Pilot's tone heard. ☐

4. Launcher safety pin pulled (aircraft taxis forward). ☐

**B-5 AN/ASM-11 CHECKOUT OF  
LAU-7/A LAUNCHER**

NOTE: Part No. 1001-1517359, FSN VM-5935-885-9397-M558 is required. This checkout applies to LAU-7/A launchers with HVAR receptacle removed and wiring modified.

1. Test set in position; knife edge pointer in extreme left edge of BLACK area. ☐
2. Cable assembly P102 connected to test set J101.
3. Safety pin installed in launcher. ☐
4. With detent raised, cable assembly lug handle inserted in position on launcher rail. ☐
5. With launcher nose cover raised, P103 connected to launcher connector (AN-3102E-22-14P). ☐
6. Auxiliary power unit connected; aircraft circuitry energized. ☐
7. Switch turned through first 14 positions. YELLOW in each position. ☐
8. On position 10, 400-cycle tone heard in pilot's ear-phones. ☐
9. MASTER ARMAMENT and SAFETY OVER-RIDE switches turned ON. ☐
10. Firing switch depressed:
  - a. Switch turned through positions 11 and 12. RED. ☐
  - b. Switch turned through positions 13 and 14. BLACK. ☐
  - c. Safety pin pulled; positions 13 and 14 read again. RED. ☐

11. Firing switch released; MASTER ARMAMENT switch OFF. ☐
12. Safety pin removed, switch turned to position 15. BLACK, and pilot light goes out. ☐
13. Safety pin removed, switch turned through positions 16, 17, and 18. BLACK. ☐
14. Switch turned to position 19. YELLOW. ☐
15. Switch turned OFF; safety pin reinserted. ☐

**B-6 AN/ASM-11 JETTISON TEST OF  
LAU-7/A LAUNCHER**

1. All ordnance (both internal and external) and other ordnance stores removed from aircraft. ☐
2. Aircraft circuitry energized. ☐
3. Jettison test for applicable aircraft performed. Knife edge pointer in RED area. ☐
4. Jettison circuitry de-energized. ☐
5. Switch turned through positions 16, 17, and 19. BLACK for each position. ☐
6. Power turned off, or removed; test set disconnected. ☐

**B-7 AN/ASM-11 AIRCRAFT CIRCUIT  
TEST OF LAU-7/A LAUNCHER**

NOTE: Aircraft must have connector MS 3106A-20-27S at or near launcher station.

1. Cable assembly P102 connected to test set J101. ☐
2. P105 of adapter connected to MS 3106A-20-27S. ☐

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3. Cable assembly P103 connected to adapter P104. ☐
4. Aircraft circuitry energized with auxiliary power unit. ☐
5. MASTER ARMAMENT and SAFETY OVERRIDE switches ON. ☐
6. Switch turned through positions 2, 3, and 10. YELLOW at all positions; 400-cycle tone heard in pilot's ear-phones. ☐
7. Switch turned to position 12. ☐
8. Firing switch depressed. RED on position 12. ☐
9. Power turned OFF; test set disconnected. ☐

#### B-8 LOADING MISSILE ON LAU-7/A LAUNCHER

Ref: NAVWEPS OP 2309, Volume 4, Third Revision, paragraph 2-1.2.

Tools: 5/16-inch hex wrench.

1. Preliminary checks:
  - a. Cockpit switches OFF. ☐
  - b. Aircraft engines OFF. ☐
  - c. Auxiliary power unit NOT connected. ☐
  - d. Aircraft grounded. ☐
  - e. Safety pin in place. ☐
  - f. NPA removed from motor of missile. ☐
2. Loading procedures:
  - a. Motor hangers inserted into launcher loading slots. ☐
  - b. Missile slid forward until it hit aft detent lug. ☐
- c. With detent raised by rotating detent wrench-safety pin, missile slid forward and front edge of hanger block engaged front detent lug. ☐
- d. Detent lowered by releasing, but not removing detent wrench-safety pin. ☐
- e. Missile is properly loaded and detent does not rest on firing button of missile. ☐
- f. Nose latch button depressed and nose fairing slid forward. ☐
- g. No damage to umbilical hook. Hook attached to missile. ☐
- h. Forward-receptacle dust cap removed; umbilical cable of missile connected by adapter to launcher power supply receptacle. ☐
- i. Nose fairing pushed home. ☐
- j. Covers removed from G&C section and fuze (just before aircraft moves forward) ☐
3. Simplified missile checkout made:
  - a. Power applied through aircraft circuits. ☐
  - b. Gyro is rotating. ☐
  - c. With gyro rotating, two-cell flashlight with glass lens passed in front of seeker head. Pilot's tone heard. ☐
4. Launcher safety pin pulled (aircraft taxies forward). ☐